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12/13/2005

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EXAMINER

HIGGINS, GERARD T

ART UNIT

PAPER NUMBER

1794

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03/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/560,603 | Applicant(s) BENNINGER ET AL. | |
| | Examiner GERARD T. HIGGINS | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-59 is/are pending in the application.
- 4a) Of the above claim(s) 32-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/29/2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The response filed 12/29/2008 has been entered. Currently claims 22-59 are pending and claim 1-21 are cancelled.

Election/Restrictions

2. Applicant's election with traverse of Group I, claims 22-31 in the reply filed on 08/07/2008 is acknowledged, as well as there restatement of their election with traverse in the reply filed on 12/29/2008. The traversal is on the ground(s) that the groups are not properly restrictable because all of the special technical features of independent claim 22 were not taught "a posteriori." Although the previous rejections have been withdrawn, the Examiner has set forth new rejections below that establish that all of the special technical features of applicants' claim 22 were known to one having ordinary skill in the art. This therefore means there was no special technical feature that defines a contribution over the prior art, which means there is no special technical feature that binds the inventions together; hence, the inventions continue to lack unity.

The requirement is still deemed proper and continues to be FINAL.

3. Claims 32-59 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or

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linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 08/07/2008.

Drawings

4. The drawings were received on 12/29/2008. These drawings are acceptable.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 22-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "said coating composition" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. Perhaps applicants meant "said wet coating composition."

Claim 22 recites the limitation "the magnetic material" in the fourth line of the claim. There is insufficient antecedent basis for this limitation in the claim. Perhaps applicants meant "the body of permanent-magnetic material."

Claim 22 recites the limitation "said body" in the fifth, seventh, and ninth lines of the claim. There is insufficient antecedent basis for this limitation in the claim. Perhaps applicants meant "said body of permanent-magnetic material."

With further regard to claim 22, applicants claim on the seventh line that "said body carries indicia in the form of engravings;" however, this renders the claim indefinite because it is unclear if this is the same indicia mentioned in the first line of the claim. Perhaps applicants meant "said body carries the indicia in the form of engravings."

Claim 26 recites the limitation "said magnetic powder" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim. Perhaps applicants meant "said permanent-magnetic powder."

With regard to claims 25 and 27, the scope of the claims are confusing because it is unclear whether the **device** is mounted on "a rotatable cylinder on a printing machine" or on "a support," or rather whether the **body** of permanently-magnetic material is mounted on a rotatable cylinder on a printing machine or on a support. It is unclear whether the device includes the printing machine or the support. For the purposes of examination, the Examiner will treat the "rotatable cylinder on a printing machine" or the "support" as being a part of "the device" instead of an intended use limitation of the body of permanent-magnetic material.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 22-24, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al. (5,364,689) in view of Graves (3,676,273).

With regard to claim 22, Kashiwagi et al. teach the apparatus of Figure 11 (col. 13, lines 4-28).

FIG. 11A

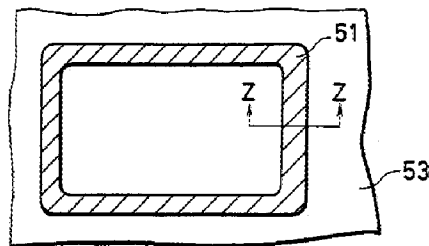
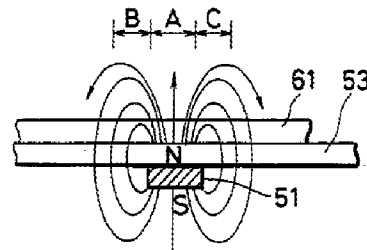


FIG. 11B



The permanent magnet **51** reads on applicants' device for magnetically transferring indicia to a wet coating composition applied to a substrate; further, it reads on applicants' body of permanent-magnetic material. Kashiwagi et al. show this in that the product **53**, which reads on applicants' substrate, has a paint layer **61**, which reads on applicants' wet coating composition. The paint layer is kept in liquid form and comprises magnetic particles mixed therein (col. 3, lines 3-34). The permanent magnet **51** applies a magnetic field to the product and orients the magnetic particles in the paint layer. It is clear from the Figure that the permanent magnet is magnetized in a direction substantially perpendicular to a surface of said permanent magnet in that the north pole is on one surface and the south pole is on an opposite surface. It is also clear from the Figure that the body is a flat plate; however, Kashiwagi et al. fail to disclose that the permanent magnet has engravings to transfer indicia to the paint layer.

First, it is also worthy to note that Kashiwagi et al. disclose many embodiments for using a magnetic field to transfer indicia, including *inter alia* forming the magnet in the shape of the indicia (Figure 13), using multiple magnets with their poles aligned and separated by a section lacking a magnet (Figures 21 and 37), and using multiple magnets with their poles alternating in direction (Figures 34 and 35).

Graves discloses that it is known in the field of films containing magnetically oriented pigments to apply a magnetizable sheet cut in the shape that is desired to be transferred (col. 3, line 63 to col. 4, line 4). They disclose along with that embodiment that the sheet containing the pattern can also be etched with grooves or other relief images, which then can be affected with a magnet to transfer the images to the film. They disclose that the magnetization can be induced using permanent magnets.

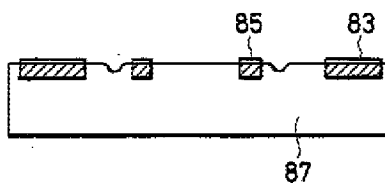
Since Kashiwagi et al. and Graves are both drawn to magnetizable pigment layers; it would have been obvious to one having ordinary skill in the art at the time the invention was made to etch grooves or other relief images into the permanent magnets of Kashiwagi et al. in the shape of the images to be transferred. Graves understands that a magnetizable sheet with the image in the form of grooves is induced using a permanent magnet it will transfer that grooved image to the film. One of ordinary skill would have a reasonable expectation that the grooves formed directly into the permanent magnets of Kashiwagi et al. would function in an identical manner. The motivation to place the grooves directly into the permanent magnet is to remove the need for a further sheet with grooves or relief images and thereby reduce costs.

With regard to claim 23, Kashiwagi et al. and Graves both recognize that the permanent magnets may be used to transfer indicia (see Figure 11A above).

With regard to claim 24, the product **53**, which reads on applicants' substrate, is clearly a sheet or a web.

With regard to claim 27, Kashiwagi et al. teach that their permanent magnets **83** may be mounted on a support member **87** (Figure 16B), wherein the support member reads on applicants' support.

FIG. 16B



With regard to claim 30, Kashiwagi et al. teach the embodiment of Figures 34C and 37C.

FIG. 34C

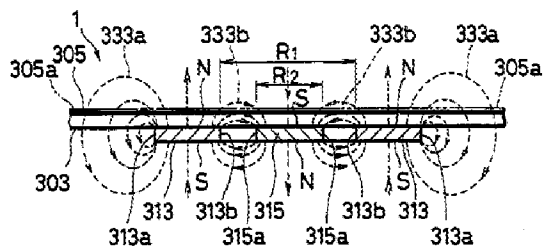
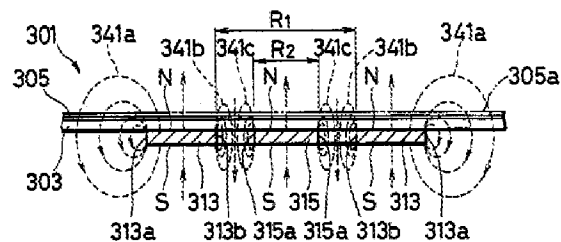


FIG. 37C



In both embodiments Kashiwagi et al. have first and second magnets **313** and **315** being used to affect the paint layer **305**. The different arrangement of the North and

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South poles of magnet **315** in the areas R_1 and R_2 lead to different magnetic fields, and thereby lead to different images in the paint layer (see Figures 34B and 37B).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place a magnetic material in the engravings of the device rendered obvious by the combination of Kashiwagi et al. in view of Graves. The motivation for placing a further magnetic material into the engravings would be to further perturb the magnetic field lines of the device to thereby generate an even more complex image.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al. (5,364,689) in view of Graves (3,676,273) as applied to claim 22 above, and further in view of Raksha et al. (US 2004/0051297).

Kashiwagi et al. in view of Graves teach all of the limitations of applicants' claim 22 in section 8 above; however, they fail to disclose that said body of permanent magnetic material is mounted on a rotatable cylinder on a printing machine.

Raksha et al. teach their printing apparatus **200** of Figure 12A [0102].

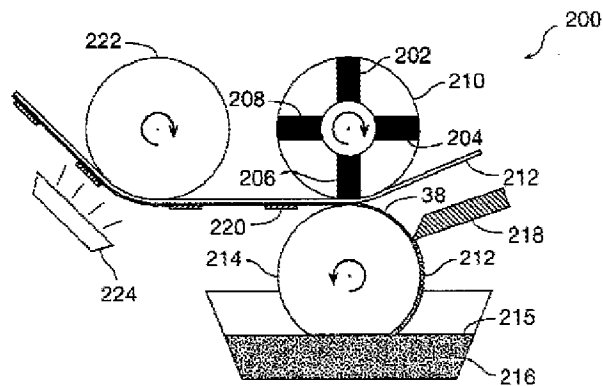


FIG. 12A

Their printing apparatus is comprised of an impression roller **210** with magnets **202**, **204**, **206**, and **208** located therein. The magnets in the impression roller selectively align magnetic pigment flakes located in an ink layer **212** to form images **220**. This is a process identical to applicants' "transferring indicia to a wet coating composition applied to a substrate."

Since Kashiwagi et al. in view of Graves and Raksha et al. are drawn to printing images using magnetic pigments; it would have been obvious to one having ordinary skill in the art at the time the invention was made to have mounted the engraved rubber magnet of Kashiwagi et al. in view of Graves on a rotatable cylinder as taught by Raksha et al. The results of this combination would have been predictable; further, one of ordinary skill would have recognized that each of the elements would have performed the same in combination as they had separately. The motivation for placing the body of permanent-magnetic material on a rotatable cylinder would be to allow the printing of a magnetic image to occur faster, and thereby to increase throughput.

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10. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al. (5,364,689) in view of Graves (3,676,273) as applied to claim 22, and further in view of Eadie (3,887,478).

Kashiwagi et al. in view of Graves teach all of the limitations of applicants' claim 22 in section 8 above. Kashiwagi et al. also teaches that the permanent magnet of their invention is a sheet shaped rubber magnet (col. 34, lines 25-33), wherein the rubber reads on applicants' macromolecular polymer. This type of permanent magnet will intrinsically have a permanent-magnetic powder therein; however, Kashiwagi et al. in view of Graves do not specifically teach the type of permanent-magnetic powder in the sheet shaped rubber magnet.

Eadie teaches ferrite magnetic materials, which reads on applicants' permanent-magnetic powder, and permanent magnets produced from such materials (col. 1, lines 4-11). The ferrites include cubic and hexagonal ferrites, as well as ferrites of the garnet type (col. 1, lines 12-18). These materials may be combined with a binder in order to assist in molding the permanent magnet (col. 1, lines 28-31); further, Eadie recognizes that the ferrites may be incorporated into rubber (col. 8, lines 21-29).

Kashiwagi et al. in view of Graves and Eadie are drawn to magnets; it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ferrite magnetic materials of Eadie as the permanent-magnetic powder in the rubber magnet of Kashiwagi et al. in view of Graves. The motivation for using these ferrites is that they are a functional equivalent of the permanent-magnetic material that is already in the rubber magnet of Kashiwagi et al. in view of Graves; further, Eadie

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teaches that their ferrites can be incorporated into a large number of devices, including magnetic rubber materials.

11. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al. (5,364,689) in view of Graves (3,676,273) as applied to claim 22 above, and further in view of Alles (3,458,311).

Kashiwagi et al. in view of Graves disclose all of the limitations of applicants' claim 22 in section 8 above; however, they fail to disclose that the surface of the device is covered with a non-magnetic material that fills up the engravings in said body of magnetic-material.

Alles discloses a protective layer formed of a plastic material for printing plates (col. 1, line 70 to col. 2, line 20). The organic polymers they are proposing are intrinsically non-magnetic.

Since Kashiwagi et al. in view of Graves and Alles are drawn to plates for creating images; it would have been obvious to one having ordinary skill in the art at the time the invention was made to cover the surface of the body of magnetic material so as to fill the engravings with the protective layer of Alles. The motivation to do so would be to protect the permanent magnet and the precisely etched images in said body of magnetic material, and thereby to extend the length of time the permanent magnet could be used.

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12. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al. (5,364,689) in view of Graves (3,676,273) as applied to claim 22 above, and further in view of Yamamoto et al. (5,201,268).

Kashiwagi et al. in view of Graves disclose all of the limitations of applicants' claim 22 in section 9 above; however, they fail to disclose that the surface of said body is surface treating to enable a reduction of friction resistance and/or wear.

Yamamoto et al. disclose a release layer (friction resistance layer) applied to their printing plate (col. 3, lines 5-10).

Since Kashiwagi et al. in view of Graves and Yamamoto et al. are drawn to plates for creating images; it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the release layer (friction resistance layer) of Yamamoto et al. on the device of Kashiwagi et al. in view of Graves. The motivation for doing so would be to provide a surface that would not chip or wear and would also allow other substrates to not stick to said body of magnetic material.

Response to Arguments

13. Applicant's arguments, see Remarks, filed 12/29/2008, with respect to the objections to the drawings and the rejection of claims 25, 27, 29, and 30 under 35 U.S.C. 112, second paragraph have been fully considered and are persuasive. The relevant objection/rejection has been withdrawn; however, the Examiner does note that other issues rising under 35 U.S.C. 112, second paragraph have come to light upon further inspection of the claims.

14. Applicant's arguments, see Remarks, filed 12/29/2008, with respect to the rejections of the claims using the Berry and Blume, Jr. references have been fully considered and are persuasive. The relevant rejections have been withdrawn; however, upon further consideration, a new ground(s) of rejection is made based upon the teachings of Kashiwagi et al. (5,364,689) in view of Graves (3,676,273).

First, the Examiner would like to note that the rejection of claims 25 and 27 under 35 U.S.C. 112, second paragraph has been restated in this Office action. The Examiner understands that applicants have support for the phrasing of claims 25 and 27; however, it is unclear of the "rotatable cylinder on a printing machine" or the support" are apart of the "body of permanent-magnetic material" or the "device" generally. If the "rotatable cylinder on a printing machine" or the support" are not apart of either the "body of permanent-magnetic material" or the "device" then the limitations of this claim are intended use limitations of the body of permanent-magnetic material. As the claims stand now, there is no indication either way.

With regard to the rejections based upon prior art, applicants are correct in stating that the device of Berry could not function as claimed because the magnetized areas are subsequently removed in the development step to create engravings. The device of Berry is a conventional intaglio printing press and could not induce formation of indicia in a wet coating composition comprising magnetic particles. The relevant rejections have been withdrawn.

Kashiwagi et al. teach permanent magnets for the formation of images in wet coatings comprising magnetizable particles; however, they fail to teach indicia in the form of engravings.

Graves teaches methods for forming images in coatings comprising magnetizable particles. He teaches sheets with engravings therein, wherein the engravings represent the images to be transferred to a wet coating composition comprising magnetizable particles. A permanent magnet is used to induce a magnetic field through the sheet to generate the image in the wet coating composition.

Since Kashiwagi et al. and Graves are both drawn to magnetizable pigment layers; it would have been obvious to one having ordinary skill in the art at the time the invention was made to etch grooves or other relief images into the permanent magnets of Kashiwagi et al. in the shape of the images to be transferred. Graves understands that a magnetizable sheet with the image in the form of grooves is induced using a permanent magnet it will transfer that grooved image to the film. One of ordinary skill would have a reasonable expectation that the grooves formed directly into the permanent magnets of Kashiwagi et al. would function in an identical manner. The motivation to place the grooves directly into the permanent magnet is to remove the need for a further sheet with grooves or relief images and thereby reduce costs.

With regard to the restriction requirement, the Examiner maintains that the combination of Kashiwagi et al. and Graves teach each and every single limitation of applicants' claim 22, and therefore there is no special technical feature of claim 22 that defines the invention, as a whole, over the prior art. This therefore means there is no

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special technical feature that binds the inventions together; hence, the inventions continue to lack unity.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner has cited various patents related to using magnetic fields to induce image formation in paint layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-F 9:30am-7pm est. (1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gerard T Higgins
Examiner
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Examiner, Art Unit 1794

/Callie E. Shosho/
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